

DOCUMENT RESUME

ED 270 849

EA 018 527

AUTHOR Ekholm, Mats
TITLE School Improvement in Sweden: Longitudinal Research Perspectives.
PUB DATE Apr 86
NOTE 53p.; Paper presented at the Annual Meeting of the American Educational Research Association (70th, San Francisco, CA, April 16-20, 1986).
PUB TYPE Information Analyses (070) -- Speeches/Conference Papers (150)
EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Change Strategies; Curriculum; Educational Change; *Educational Improvement; Educational Policy; Educational Research; Foreign Countries; Governance; Government Role; Inservice Teacher Education; *Longitudinal Studies; National Programs; National Surveys; Politics of Education; *School Organization; Student Attitudes; Teacher Attitudes; Teacher Student Relationship
IDENTIFIERS *Sweden

ABSTRACT

This paper reports the results of research examining the long-term success of Sweden's educational reforms. The paper's first section describes the Swedish educational system's structure, noting the roles played by the national government, local governments, and the National Board of Education. The second section of the paper looks at Sweden's history of interest in educational improvement, discusses changes in the national curriculum, and describes the policies (and their costs) for professional development of teachers. The third section of the paper describes three studies providing longitudinal information about the effects of these professional development programs. One of these studies, conducted in 1979, replicated another study, conducted in 1969. These 2 studies obtained information from students and teachers in upper grades in 12 locations around Sweden. The data showed relatively few changes in classroom teaching styles, some decreases in student and teacher workloads, and little increase in student feelings of independence. The third study, a 4-year study in three school management districts, found the schools' decision-making system a major cause for the schools' resistance to change. The findings of all three studies suggest that research results may not be broadly generalizable even in centralized educational systems. (PGD)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

ED270849

EA 018 527

SCHOOL IMPROVEMENT IN SWEDEN.
LONGITUDINAL RESEARCH PERSPECTIVES.

Paper presented at
The Aera Annual Meeting in San Fransico
16-21 April 1986

Mats Ekholm

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

☒ This document has been reproduced as
received from the person or organization
originating it.

☐ Minor changes have been made to improve
reproduction quality.

• Points of view or opinions stated in this docu-
ment do not necessarily represent official
OERI position or policy.

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

Mats
Ekholm

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

CONTENTS

Education in Sweden - Basic Facts	2
School Improvement Work on a Political Basis	7
Research on the Effects of the Improvement Efforts of the Seventies and the Eighties	16
References	48

EDUCATION IN SWEDEN - BASIC FACTS

Sweden has as a main policy of education that education in different parts of the country shall be of equal quality and has the same value. All education is free. Education is compulsory from when you are seven years old until you are sixteen. During these nine years you go to the "grund" school. Most students go the "gymnasium" for two, three or four years of studies after the grund school. In spring 1986 97% of the students of the last year of the grund school applied for the gymnasium. Almost all of them will attend the gymnasium when the school starts in the autumn.

Ownership and the administrative system

All grund schools and gymnasiums are financed by the Swedish society. The costs of the school are shared by the state and by the "kommun" ("kommun" is in many ways equivalent to concepts like community, city, municipality or district. But it also has differences in relation to these concepts. I will therefore use the Swedish concept to remind the reader that it is not the same as the English or American concepts.) What is done in school therefore is decided in different political instances. The parliament and the government have as their task to decide on the organizational guidelines for the schools.

The parliament and the government also have power over the broader selection of content in the schools. To get their decision put into practice the state of Sweden has a certain administrative body in between the kommuns and the state called the National Board of Education (NBE). This board has as one task to draw guidelines of how the educational policies shall be practiced in the school system. The board has both supportive and controlling functions in the system of education. The NBE consists of about 300 civil servants located in the capital city and about 500 civil servants located in 24 different regions. In each of the regions there is one county board of education. The county boards are parts of the state system of education and have supportive and controlling functions as well.

The NBE both works for the government as a preparing and advising body and has a position as policy maker in its own in many questions. The idea of having a certain board acting in this way has its roots back in the 17th century. At that time the Swedish king and government spend most of their time on the European continent occupied by war. To be able to cope with the internal affairs of the state the king created a "shadow" governing system that took care of the administration of the country while he was away. This idea is still in use in Sweden, although we have not participated in any war since the years of Napoleon. There are several other National Boards, except for the one about education, that deal with social welfare, communications, building constructions, environment etc.

On the local level the Swedish school is administered by the kommun. Sweden is divided into 284 "kommuns". The largest one, Stockholm has about 800 000 inhabitants.

The smallest, Sorsele, has only about 4 000. Most of the kommuner have between 10 000 to 40 000 inhabitants. Each kommun has its local parliament that reflects the political opinions. If the kommun is big enough, you will find a school director at the top of the local school system. As a top manager of the local schools he is appointed by the Local board of education of the kommun. The members of the Local board of education are politicians, elected for three year periods.

The kommun is in some aspects autonomous in relation to the state. The local board of education, that reflects the local political climate and relations of power, controls about half the budget of the schools. The other half of the school budget is controlled directly by the state. The state give money to the salaries for teachers and school leaders. The kommun pays for buildings, maintenance services, food for the students and the travels for the students.

The grund school of the kommun is divided into smaller geographical areas called school management areas. Within such an area you will usually find about six to seven hundred students, about seventy to eighty teachers, two to three school leaders and about thirty people who work with food services, student care, counselling, maintenance services, clerks etc. Within each school management area you usually find about three or four school sites. In the larger cities a school management area may have only one site. In the rural and sparsely populated areas of Sweden you may find as many as seven or ten smaller schools within the school management area.

All school management areas of the grund school, there are about 1 500 of them in the whole of Sweden, are

structured in the same way. During the first three years the children are kept together in classes of about 23 - 24 students in each. They are mainly taught by one teacher through all the three years. Of the thirty school hours (= 40 minutes) of the week in grade three you spend about twentysix or twentyseven with the same teacher. From grade four to seven you are taught by another class teacher during the great majority of the thirtyfour weekly school hours. There is about 27 -28 students in each class during these years. However, during these years the students meet more teachers than during the first three school years.

When you enter the seventh school year you will meet many new teachers who are specialised in different subjects. They will also teach you for three years in their subject, but altogether the student needs to cope with seven to ten teachers during these years. During all nine school years of the grund school in principle you will stay in the same class in which you once started. There are no streaming or selection of students until the tenth school year when you enter the gymnasium. Transferring to the gymnasium to most students mean that they continue their studies within an area where they have a high interest. To some of the students it means that you were not successful to get a study place in competition with students who scored higher than you did during the last year of the grund school.

The subject teacher system is also in use in the gymnasium where the teachers follow their students during all the school years. In the gymnasium there is a big variety of study lines, constructed for all kind of interests and needs. The shortest study line is for two years and the longest runs for four years. Some of the study lines

are directly preparing you for working life, as i.e. lines on construction work, the line for hair dressers. Some other lines are preparing you for further studies in different areas like science, humanistics, civics etc.

SCHOOL IMPROVEMENT WORK ON A POLITICAL BASIS

Since the first world war there has been an ongoing discussion in the Swedish society about the quality of our schools. As the state and kommun is the well accepted owners of the schools, the initiatives to improve school life is a question of interplay between the school professionals and the politicians. The debate of school improvement has had different peaks during different parts of the century. In the earlier parts we were occupied with changes of our central curriculum so that the educational process could be developed on the basis of the children, instead of adults and so that less time was spent on religious training. Later on the view on the schools as organizations, that could be used to create a better society, dominated the discussion and the political decisions.

Soon after world war two, the content of the Swedish school was changed to earn the future more than being a reflection of the past. The debate then focused on issues as if the schools really provided the young ones with good education. Questions were risen if the youth really were able to write and read good enough to cope with life in modern society. As a result of the reformation of the schools at that time the students were kept in schools for a longer time - nine instead of seven years from 1962 and onwards.

From the fifties and onwards the Swedish students have also been expected to learn how to cope with life in a democratic society in an independent way rather than learning to be obedient to somebody that has got a higher position. This ambition for the social development of the young people of Sweden was strongly stressed by politicians during the late fourties on basis of the experiences that had been made in Germany, where the school system strongly had stimulated obedient and dependent behaviours.

In the school regulations (Chapter 5, paragraph 1) the political strivings for the education of the young Swedes are condensed into one sentence:

"The school shall, through its atmosphere and environment, develop the students' self-reliance and independent judgement, as well as accustom them to honesty, consideration, attentiveness toward others and good manners."

The "Läroplan" - the basis of improvement work in school

In the school regulations and in the "Läroplan" the ambitions that the Swedish society has for young people are expressed quite evident. These ambitions are elaborated most evidently in the "Läroplan", the central description of the curriculum of the Swedish school. In the "Läroplan", that is a book on 166 pages, you find three main sections. In the first one the main aims of the school is explained together with a presentation of some guidelines on how you may reach these aims through school work. In the next section of the "Läroplan" the aims of the different subjects that are defined and the aims of them are described. In the last section of the

"Läroplan" the distribution of time between different subjects during the school year is described. All grund school management areas are requested to produce a local working plan of their own, in which they declare what priorities they do of the main content of the "läroplan". When the local working plan is made the staff in the school management area also have to declare what improvement needs they perceive for their schools and how they think that they will cope with these needs.

In-service training of teachers

Today in-service training of teachers in Sweden is a well accepted and well integrated part of the life of the school. Every teacher, in the comprehensive school as well as in the gymnasium, participates in the five annual study days. During these five study days the students are free from school. To stimulate the teachers to develop their subject knowledge and their know-how about working methods, in-service training events are arranged by the single school management area on its own, by the kommun and by the county board of education, by universities and publishing companies as well as by consultants of different kinds. The in-service training that is arranged may be better or worse adjusted to the development plan that the kommun or the local working plan of the school management area.

The annual total costs for the in-service training of teachers in Sweden is about 650 millions of Skr. About half of this money consists of the salaries to the teachers during the five study days. The other half is given to the kommun as a state grant to be used for development of the schools. Within some limits the kommun

BEST COPY AVAILABLE

decides how to use this money. The state regulations for the use of the money states that 60-80% of the grant to the kommun shall be used for education of the teachers and 20-40% shall be used for costs linked with local development work in the schools of the kommun.

In a study based on information of the use of these funds collected in 109 of the 284 kommuner in Sweden, Henricson (1984) found that the kommuner at an average used 63% of the money for staff education. If this cost was evenly distributed to all teachers in Sweden, the state would spend an average sum of 1 200 Skr* on continuous education of each teacher. If the same calculation is made for the grants that are used for local development work about 700 Skr is given to each teacher to stimulate the local school development, which means that an ordinary headmaster area each year has about 30-50 000 skr to use for development work in the local school. The decision on how these money will be used is reached in the headmaster area among the staff. The money is mainly used for activities that the staff believes may stimulate the development of the inner life of the school. It may be fees to a consultant or to a visiting lecturer, salaries to members of the staff who have got certain development tasks to deal with like planning work etc.

Of course it is not all teachers who are able to use the money that are offered for continuous education each year. Henricson (1984) found that about every fifth

* The average salary of a Swedish teacher lies around 110 000 Skr. The salary of a primary teacher is about 100 000 Skr and of a teacher of academic subjects at the gymnasium level about 125 000 Skr.

teacher in the comprehensive school and the gymnasium were financial supported to participate in some kind of continuous educational programme or events. Mostly the teachers participate in some kind of education at a university. The average sum, that the teacher who participates in a continuous education activity is supported with, is about 11 000 Skr. These money is used to cover course fees, costs for travel and accomodation and (with the largest sum) for salaries to the substitute for the teacher in his ordinary class.

The later part of the support system in the Swedish schools - the state grants to the schools - is a part of the system that is fairly new. It began to run in 1982, so we do not yet see what the action patterns are when the system has found its stable forms. There is still adjustment difficulties, both in the kommuns how to use all the money that are given to them for development reasons and at the universities that have not yet found the best ways to help teachers to learn more. It is therefore also too early to look for school improvement effects coming from this part of the school support structure.

The study days

Even if there is a good deal of money by which the society supports continuous education of teachers and the development of the inner life of the school, the most dominant support of the development of the school still is the five study days. These five days are the part of the support structure that all people who work in a school are touched by. During the five study days the school can chose any content that it finds to be fruit-

ful. The study days are today so accepted in Swedish schools that there are no debate about them at all. They are seen as something that is there in the school. They are a self evident phenomena in the life of the school.

The study days are seen as something very positive by the students as they are free from school. The parents have since long accepted them, although they are not as positive towards the study days as the students. To parents of the younger children the study days mean a certain degree of problems. Most of them have to find alternative child care during these days, as about 80% of Swedish families, with children in the primary and middle levels of the school, have parents who work outside the home.

The study days are so self evident that they very seldom are evaluated. We therefore know very little of the effects of the study days. There have been many immediate "instant-evaluations" on single schools of how people have reacted on the content of the single study day, but there is at large a big lack of knowledge about the effects of study days. On the basis of somewhat more systematic work Eklund (1974) reported about the opinions on the study days held by 554 teachers from all over Sweden in the middle of the seventies.

He showed that 71% of the teachers estimated that the study day activities had not stimulated them to any form of optional in-service training. 58% of the teachers said that the work during the study days had not given them a strengthened feeling of competence in their work. In the study 22% of the teachers expressed opinions that they had become stimulated in their work in the school.

The study days are perceived as one important component of planned change efforts in the Swedish school. The purpose of study days in the school structure is that they shall be a channel through which the state and the kommun can send out important messages about changes of the school or through which they can communicate demands that are put on the school. The norms that usually regulate the content and the procedures of the study day may briefly be summarised so that the content ought to be common and of use for most teachers in the school. The content is also expected by the teachers to present news of some kind. The procedures may vary, but it is very common that some part of the day is used so that all teachers of the school stay together and listen to a lecture of some kind. It is also very common that there are discussions between the teachers in smaller groups.

Other in-service training efforts used for school improvement purposes

Along the study days as the most dominant instrument to use for school improvement there are also other in-service training efforts that have been used in Sweden to improve the quality of the schools. Two large programmes were introduced in the mid-seventies as one part of a school reform. In the Team Training programme, a group of about fifteen persons from the staff of a school management area used ten days outside the school, spread out over a year, to analyse their school and try to improve what was seen as not well functioning. Teachers, one of the school leaders but also people working with student care, parents and social welfare people participated in the team. There were especially strong expectations on these teams that they should stimulate co-

operation between different parts of the staff in the school and that they should pay a lot of attention to the students that showed difficulties in their school work. Most of the ten days that the team was kept together were used for internal discussions in the team on the situation back home and on how to implement ideas that were born during training sessions back home in the school management area.

At the same time as the school management area was given support by the state through this programme, the school leaders participated in a two year school leader education. In this programme about 60 days were used by the school leaders to learn more about how you manage school improvements in your own school management area. The educational programme was built on three components. 20 days were spent on course days spread out over both years. 10 days were spent on a society-oriented experience period, during which the school leaders participated in ordinary work, i.e. in a factory in your own home town. 30 days were spent on "home-work", where the school leader had to test different ways to improve his school management area and to reflect on experiences made during the testing periods.

Along these large scale in-service training programmes there have been other improvement efforts used in Sweden during the last decade. Many teachers have i.e. participated in a year long training in special education to become better in dealing with students with school difficulties. There have been offers given to schools to send teams on other in-service courses than the team training programme. All school management areas in the grund school got a special grant on about 30 - 40 000 Skr during 1980 to 1984 to implement the revised "läro-

plan". Many schools used this money to construct their local working plan, that have had many directing effects of the local school life.

RESEARCH ON THE EFFECTS OF THE IMPROVEMENT EFFORTS OF THE SEVENTIES AND THE EIGHTIES

In Sweden a good deal of money is spent on school improvement efforts. There is a strong belief that it helps to support schools to get a better learning environment for the students in which they can learn what the society expects. As the improvement efforts have been going on for a long time in a rather well planned way it has been possible to make studies with long term perspectives of the improvement efforts in Sweden. All over the world there is not too much of knowledge produced about schools' ways to improve their own working processes where we have followed single cases over many years. Many of the studies about what happens when schools try to develop or improve have a perspective limited to one or two years. As schools mostly tend to exist much longer and also happen to need recurrent improvements, we need more of longitudinal studies of schools that struggle with improvement work over a longer time than the ordinary academical fellow can spend on his study objects as a result of the thinking of his grant givers.

The Swedish situation has given us a good opportunity to study what happens when planned improvements are implemented into schools. I will describe three such studies made in Sweden to give an example of the kind of findings that may occur from the kind of longitudinal re-

search that I mean is needed if we are going to be able to present useful knowledge to people who work with school improvement.

I begun the first study (Ekholm, 1976) in 1969 when I tried to catch the climate of fifteen school management areas of the grund school. The study was limited to the climate of the upper stage of the grund school where the students are 14-16 years old. At this stage of the school the teachers are specialised subject teachers who follows the students through all the three years of the stage. I used a battery of about 120 questions to the teachers and to the students of grade eight, which represented the whole student population of the school. Some of the questions where the same for students and teachers. Ten years after that the first study of the school climate was made I repeated the study. That means that the teachers and the students in the same school management areas answered the same questions about the inner work and the inner life of the school. In 1979 when the study was repeated there were only twelve of the originally fifteen school management areas left. Three were closed due to changes in the structures of the kommuns that participated in the study.

In the second study (Sandström, 1986) the inner lives of three school management areas were intensively followed during four years (1977 to 1981) to detect the process of innovation. In each of the three school management areas one half time working researcher made continuous field work in a socio-anthropological way. The three schools that were studied lived under pressure from political forces to make changes both in its organization and in its working traditions to make the life in the school more meaningful to the students.

Working Methods - The Development Over Ten Years

I will present parts of the outcomes of the three studies to illuminate the kind of knowledge that we can gain from stubborn and persistent research approaches to school improvement efforts. The first illustration comes from the ten-year study of twelve principal's areas. My choice of results from this study is based on the movements in the debate and in the policy discussions within the Swedish society during the seventies.

One of the consistent improvements that the Swedish society has striven for during this ten year period has been to make the day to day work in the classroom more varied. Through many channels the message has been clear - less direct teaching (traditional teacher talk and questioning with students responding) and more of the exploratory working methods with a higher degree of student involvement. During the seventies the message was presented in governmental bills, in changed central curriculas, through journals of the teacher unions and it was brought out during study days and also during summer courses in which some of the teachers of the twelve schools participated. A measurement of the effect of this improvement attempt is presented in Table 1.

Table 1 is based on answers from students and teachers to the questions: "You have many different subjects and teachers in school. The class works in many different ways. How often are the working methods presented below used in your class?" (Students); and "How frequently do you use the following working methods in your daily teaching?" (Teachers). Both teachers and students were presented with descriptions of five working methods and were asked to mark if the five specific methods were

Table 1. Percentage of Students and Teachers in Twelve Swedish Comprehensive Schools who Reported on the Daily Occurrence of Teaching Practices in 1969 and 1979

1969 and 1979				1969 and 1979			
Students		1969	1979	Teachers		1969	1979
		%	%			%	%
1	The class listen and the teacher talks	81	81	1	You lecture the subject while the students listen	36	46
2	The teacher talks and puts questions. Single students answer the questions	85	77	2	You lecture the subject, put questions on it and the students answer and listen	67	67
3	The teacher and the class discuss together	19	24	3	You and the class discuss the subject and related questions together	58	64
4	Group work with specific tasks	2	4	4	The students work in groups with specific tasks and you are available to them	30	43
5	The students work one by one with individual tasks	38	48	5	The students work individually with specific tasks. You are available to them	56	63

used several times per day, once a day, once a week, sometimes during a month, almost never or never. In Table 1 frequencies for those students and teachers in all the twelve schools are shown, who have given the answers "several times per day" or "once a day".

The results that are presented in Table 1 give a rather evident picture of what happened over the ten years - very little changed. Both teachers and students judge the daily use of the five different working methods in the same way in 1969 and in 1979. There are only small shifts in some of the perceptions for both teachers and students.

Teachers as well as students on both occasions found that the traditional methods (1 and 2) were used frequently every day. There are more students than teachers, reporting that this is the case, both in the case of the pure lecture and the question-answer kind of lesson. There are several possible interpretations of this difference. The teachers were more aware of what was intended, and they occupied different social positions than the students in school. Perhaps, the most striking interpretation of the differences between the students' and their teachers' perception of what is going on in the classroom is that the teachers' judgement is strongly influenced by their ideal views of the working process. They report more frequently what ought to have happened instead of what did happen. The students are in their testimonies free from this kind of bias - they have very little knowledge of the ideals for the working process and therefore report a more factual situation.

However, my focus in this chapter is not on how teachers and student view the work in the classroom, but rather

the changes that have occurred over the ten year period. Both students and teachers report a greater daily emphasis on discussion (item 3) and individual work (item 5) in 1979 than was reported in 1969. A greater percentage of teachers in 1979 reported spending more time daily on group work (item 4) than they did in 1969, but a similar shift was also evident in the case of lecturing (item 1). However, when one examines the student data, the shift from lecturing to group work over the ten year period, the change is really not so evident.

Direct observations of the use of working methods in Swedish schools that we conducted in the middle of the seventies (Ekholm, 1976), where fifty-four classes were observed during three days, justifies the testimonies from the students. I then described what was going on in the ordinary classroom in the following way (Ekholm and Wernersson, 1976):

The school work pattern showed itself to be relatively monotonous. Observation results show that pupils worked mainly by themselves on an identical task. Besides this work method, the hours in class were dominated by the teacher speaking, in the form of explaining the subject and then asking questions. Pupils did seldom any form of collective work but being together in the same room. Classroom work was steered mainly by the subject taught and the textbook and/or teaching materials, and to a certain degree by the teacher.

When we look at the differences over the ten years with the students' results in focus, we can conclude that the working pattern in the school is very stable.

There was a small tendency for students and teachers to report more discussion in 1979 than in 1969 and it was more common in 1979 than in 1969 that the students worked on individual tasks. When we look at the teachers' perspective we can note that there are more teachers in 1979 who say that they use lectures, discussions, group work as well as individual tasks in their day to day work in the schools. The conclusion for the total picture is that the teachers during the ten year period have become more aware of the demands for more varied working patterns in the school. Their willingness to use group work and discussions, during which the students can be more active, has grown through the years, which also is to be seen as an improvement when compared to the values that the Swedish system is based on.

The schools seem to have improved with regard to the attitudes of the teachers. The study days seem to have had some of the effects they were expected to have. But in such a relatively short period of time, as ten years, when we studied social changes, the working habits and routines do not seem to have changed in the same way that the attitudes of the teachers have changed. Certainly, the changes have not been such as the students are perceiving the daily use of working methods in a new way.

One of the teaching approaches that did provide a shift over the ten year period according to both teachers and students was the individual work of students (item 5). What are the roots of this change? One explanation can be found in the teachers' participation in study days and their absorption of the messages from the society about specified changes of the school life. However, this change may have been a mechanized, technical change

rather than one grounded in the in-service training of teachers. The reality behind this change in working method seems to be linked to ready made teaching aids in the form of work books and teachers mimeos.

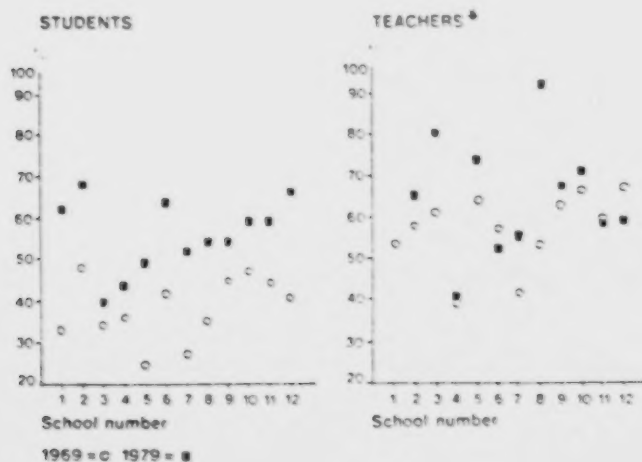
During the ten years that have passed between the two survey occasions, the development of copying machines has been very rapid. By the help of these machines and by the growing market of pre-produced working materials, greater possibilities for the teachers to engage students in individual work have occurred. But most students are working with the same tasks at the same time. The reason for the shift in the use of this working method seems to be a rather materialistic one, which gives the teacher a better work economy and at the same time leads to a more mechanical way of working in the schools. This shift doesn't seem to be an adjustment to the developmental level of the student. It is not a question of a larger individualization of the school work. It seems to be a more effective way to direct the work of the student.

So far I have shown the overall picture of the changes over the ten years. But what about the single school management area? Is there the same development in all of them? In Figures 1 and 2 the results are shown for each of the twelve schools on two of the working methods - the individual work and the discussions between teachers and students.

If we use the views of the students work in the classroom, there seems to have been a general change over all schools (Figure 1). However, when we consider the situation from the teachers' point of view, the general pattern is not so evident. In five of the schools the

change is very small or nonexistent. In two of the schools the change is small but opposite to the student pattern. In five of the schools the changes are evident and in the same direction as those of the students. In these five schools we can talk reliably about a change in the way students work individually. However, as I mentioned before, it is doubtful that these changes represent an improvement.

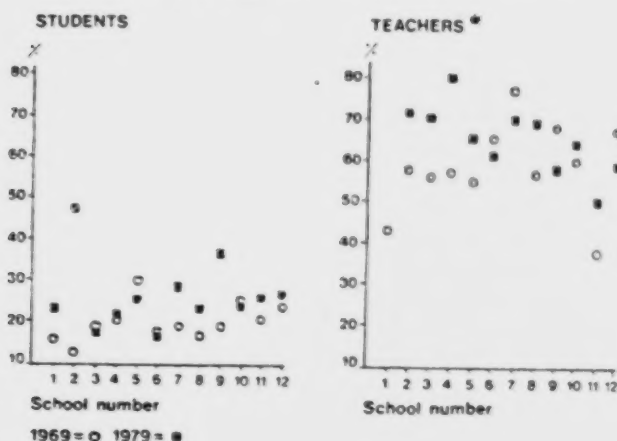
Figure 1. Percentage of students and teachers who report that students work individually with specific tasks every day.



* School 1 got such a high no-answer rate among the teachers that it is not presented here

In Figure 2, I have chosen to show, for each of the twelve schools, how many students and teachers who say that there are discussions in class between students and teachers every day. What seems to be a general pattern in Table 1 (where in 1979 both students and teachers more frequently say that the teacher and the class discuss each day) is not a general pattern in this case. In four of the schools (schools 2, 7, 8 and 11) both students and teachers have said more frequently in 1979 than in 1969 that there are daily discussions

Figure 2. Percentage of students and teachers who say that the teacher and the class discuss together every day



* School 1 got such a high no-answer rate among the teachers that it is not presented here

between the teacher and the class. In these schools it seems to have been an improvement of the working methods; in the other schools, there are no signs of this improvement.

Changes in Work Load

Another question in the study dealt with the work load of the students. Students were asked the question "How often do you usually have homework during an ordinary school week?" Eighty-seven percent of the boys and 95% of the girls in 1969 said that they had homework to do almost each day or each day in the week. In 1979, 64% of the boys and 74% of the girls said the same thing.

Behind this change in work load of the students lies a plea from the central authorities for a less overloaded working situation for the students in the comprehensive school. In the central curriculum that was presented in 1969 there were recommendations given to the teachers to be more careful with their homework assignments, as studies had shown that the leisure time of the students tended to disappear. The plea for a new homework norm was also spread through journals and through discussions among the teachers. The results of my study show that this campaign seems to have had effect. The work load among the students is lower in 1979 than in the 1969. On another question the students have estimated how much time they work each day in their home with school tasks. In 1979 there were 62% of the boys and 52% of the girls who used less than an hour each day to do their homework. In 1969, 49% of the boys and 31% of the girls said that they used less than an hour on their homework.

Is this change in the working habits of the students a change for the better or for the worse? Some people find the change to be for the worse as they think that the students learn less when they spend less time on their studies. Others say that it is an improvement that all students are treated alike and given the same chance to

learn in an environment where there are professional people available to help them. These different opinions are represented differently in the twelve schools. There are schools in the studied group in which about 90% of the students in 1979 say that they have homework to do every school day, and other schools in which only about 30% say that they have homework to do every day. In 1969 the variations between the schools were much smaller. The lowest proportion of students who then said that they had homework to do each day was around 80% and the highest proportion was 100%.

What happened during the ten year period with the work load of the teachers that participated in the survey? In Table 2 the medians of time that the teachers say that they spend on their job outside their regulated work in the classroom is presented.

In Sweden the working time of the teachers is regulated through collective negotiations between the central authorities and the teachers' unions. The work load is defined by the amount of lessons that a teacher has to do each week. An academic teacher working in the comprehensive school has to do twenty-four forty minute lessons per week in the class in his subjects. A teacher who is working with non-academic subjects, (handicrafts or physical education) has to do twenty-nine lessons per week. In Table 2, both types of teachers are included. As can be seen in the table the teachers are working less time in 1979 than in 1969. The differences between the two occasions are statistically significant for the male teachers and not significant for the female teachers. The roots of the differences between the sexes reflects the different traditions of work differentiation in Swedish homes, where women still have more re-

sponsibility than men. This tradition creates a smaller possibility for the female teacher to engage in her work outside classroom activities.

The results from the study show that the teachers have cut down their working time in the same way as the students had. The decreasing working time is a fact in all but two of the twelve schools in the sample. In the traditional debate in Sweden about the work load among teachers, the view that the teachers' working time has grown instead of decreased is strongly put forward by the teachers' unions.

Table 2. Median time that teachers in twelve Swedish comprehensive schools work each day, outside their regular lessons*

	Men**		Women	
	1969	1979	1969	1979
Median time in hours per day giving lessons to class	2 h 20 min	1 h 48 min	1 h 49 min	1 h 36 min

* Including such activities as contacts with parents, conferences, assessments of written tests etc

** The differences between the median scores for both men and women were tested using chi square. The chi square for men was 7.74 ($P=0.01$) and for women 1.53 ($P=0.30$).

The teacher unions see an increase of the working-time as an impairment, so they ought to see a decrease as an improvement. But is this shortening of the teachers'

working time an improvement? In what way does the shorter working time affect the quality of the education?

The Cognitive Learning of the Students

In what way has the students' learning changed during the seventies? Did they learn more or less, better or worse in the late seventies. Unfortunately I have not succeeded in collecting information to illuminate these questions in the ten year study. There are results of knowledge test available at the first survey occasion, but not at the second. Although this is the situation, it is possible to give some illustrations of what has happened during the ten years in Sweden at large by the use of the results from another study.

Murray (1978) has analyzed the results of the standardization of knowledge tests that were used in Swedish schools during the seventies to control the quality of the knowledge of the students in different stages of the comprehensive school. She has compared the results for nationwide samples of students during the period 1967 to 1978. In her study, Murray shows, that there are no signs of either improvements nor impairments during the studied decade in the results on the knowledge tests among students of the same age as those who participated in my study. If it is possible to draw generalizations from the study Murray has done, and I think it is so as the samples that have been used are representative of the Swedish students, there are probably no changes in the students' learning results over the ten years. This assumption seems reasonable also in the light of the small changes in the use of working methods that have been reported here. The only evident change that seems

to have occurred has to do with the time that students spend on homework. The shift I have noted here is, if we look at the total amount of time that the students use for learning, of minor importance. The loss of this learning time may very well have been compensated by more concentrated work during school hours or by the influence of other learning sources than school.

The Social Learning

However, there are other learning ambitions in Swedish schools besides cognitive ones. As I pointed at earlier in this paper the Swedish school is also trying to stimulate social development of the students. In the ten year study I have also tried to illuminate what has happened to the efforts of the school to influence this development. One of the questions that was used to measure the degree of independent behaviours among the students was formulated in the following way:

Imagine that your teacher gives you a task. You are as quick as possible to find out how a certain thing is produced. The teacher has told you how to do it: go to the library and read about it in a book. But you yourself can figure out another way that is quicker. Perhaps you can get this information from someone you know who works in such production, or by ringing up a factory, or in some other way. Which way do you choose?

- 1 () Do as your teacher told you, and go to the library
- 2 () Ask your teacher if you may do as you yourself have thought of
- 3 () Do as you yourself have figured out without first asking the teacher

Not only the students were asked to answer this question but also their teachers. I asked them to tell how they would like the student to act in the situation that is described in the quoted question. The answers from the teachers are presented in Table 3.

The results show that the positive attitude towards the students' independence in the school situation has become somewhat more embraced in the end of the seventies than it was in the end of the sixties. It is an attitudinal development that is more evident among female teachers than among male teachers. In relation to the ambitions of the society the school seems to have improved in this area during the studied decade.

Table 3. Percentage of teachers answering how they would like a student to act when there is a possibility to choose an independent way to solve a school task.

I would like the student to	Men		Women	
	1969	1979	1969	1979
do as I told him and go to the library	0	4	5	1
go and ask me if he can do as he had thought on his own	71	61	76	67
do as he thought himself without asking me	26	34	14	29

N 1969=269

N 1979=201

This is true if we stay with the results for the teachers. When we look at the answers from the students, however, there are no signs of improvement. Both in 1969 and in 1979 the great majority of the students (seven boys out of ten and eight girls out of ten) declared that they would have asked the teachers for permission to do what they had thought of themselves. Only a minor proportion (about one out of ten) said that they would follow their own idea first. The changes in the attitudes among the teachers have left no traces in the attitudes of the students. It seems as if the students have not noticed the changed attitudes among the adults in the schools.

The whole system of the school is here something of a hindrance towards a change. The students believe that the teachers have lower expectations of them than they really do in relation to the aims of the social development of the school. In other questions that were used to catch the degree of independence among the students (in which I ask them about their way of acting in less school related situations) the comparisons between 1969 and 1979 show that a lot more students in 1979 act more independently than in 1969. This result suggests to me that other socialization agents, like the family, have been more evident in showing their positive attitudes towards the independent behaviour among youth than the school still is. An improvement of the up-bringing of the youth has occurred in the society, but the improvement is not occurring in the school.

Also other results from the study show that the relation between teachers and students in the Swedish comprehensive school has not improved during the studied decade. The teachers have very high ambitions for the students.

way of treating socially deviant students. The results of the study over the ten year show that the students become less tolerant towards socially deviant students (Ekholm, 1984). Analysis of the correlations of the teachers' and the students' answers in the different schools in 1969 showed that there was a positive correlation, which meant that students in schools where teachers held high ambitions for their tolerance towards deviancy also had the most tolerant attitudes. In 1979 this correlation had disappeared, which might mean that the content of the relation between teachers and students in the studied school has become less oriented towards the social development of the students.

The four year study of three school management areas

The most striking result of the ten year study in Sweden is the great stability that has prevailed in the schools. Most changes that have been noted are small and there are many areas that have been studied where no changes at all seem to have occurred. One can also doubt if the changes that occurred during the decade really are to be seen as improvements, which brings the concept of improvement under debate. To be able to talk about improvement you have to rely on some values. In the case of the Swedish schools this is not a difficult task as we base our school work on declared political values that are presented in the school regulations and in the central curriculum of the school.

Another goal of the Swedish school is to make its inner life highly democratic. The teachers shall have a lot of influence over their working situation. And so shall the students. The results from the ten year study indicate

that the teachers have a great deal of power over the school situation, but leave very little to the students. The situation does not seem to have improved in this area during the seventies for the students. The results of the study also indicate that there is not very much change in the schools, even over a ten year period during which a system of in-service training worked among other things using almost fifty full working days for all teachers. What accounts for such stability in a system which was given a clear direction for change and a mandate to implement such change?

Of course there are many possible explanations why so little has changed during the seventies in Swedish schools but I will concentrate on just one. I turn to the results of the intensive four year study of three school management area (Sandström and Ekholm, 1984 and 1986) to illustrate something of the processes that lies behind the stability of single schools in Sweden.

The main purpose of the four year study was to understand the process of change in the comprehensive schools, which were under pressure from society to change along the lines described earlier. One researcher in each school spent about 30-40% of his time observing and interviewing. During the years of the study we saw very little of change and improvements in the three school management area that survived. Several initiatives were taken in all of the three school management area. But most of the ideas that were presented or inventions that were made faded out or disappeared into the occupied minds of the people of the schools. Among many things that appeared in front of the eyes of the researchers there were the study days. They saw four times five study days during which the staff of the

schools worked with both topics raised at the central level and with topics that came from their own discussions and problem solving efforts. We found that the study days were not put into any systematic plan of local improvement. Therefore the activities of the study days became isolated events, that unfortunately only slipped through the fingers of the school leaders and the staff.

As so much of stability was observed in the schools during the four years we turned our research efforts more and more to explain the phenomena of stability instead of change. One of the explanations that has become very evident to us has to do with the decision making system of the local Swedish school. One of the researchers who has studied a local school for four years writes in his report about the existing decision making system in his school (Sandström, 1983, p. 27).

After a matter has reached the school leader, some of the matters are dealt with immediately by the school leaders in their function as "gatekeepers". Through this procedure some minor matters are taken care of not to overload the other working routines. The matters that pass through the "gate keepers" are worked through by committees. At the first available staff conference (in which all adults in the school participate) the actual matter is transferred to a committee. This committee is composed of people who are judged to be able to deal with the actual matter, but at the same time there is an ambition to spread out committee work to as many as possible of the school members. In the weekly "school paper" the committee informs about its work. In the "subject group" meetings, a discussion is held about what the committee

has said in the matter as a preparation for the real decision that is taken in the staff conference. During this conference all adults that are working in the school are present. Most decision are made through acclamation. If voting is necessary the principle "one man - one vote" is used.

He reports that few teachers were aware of this decision making process. The description that the teachers gave of the decision making system in their own school varied to a large extent and many of the teachers were conscious only of minor parts of the whole system.

Sandström (1986) finds from his analysis of four years in the same school that these decision making procedures frequently become ends in themselves. Many of the objectives and intended reforms disappear in the process. Many decisions are reached, but never implemented or realised. He also points to the fact that there is a very loose linkage between a decision made at the school and what happens afterwards. Seldom does anyone in the school have the task of controlling or monitoring how the adults follow the guidelines that a specific decision in the staff conference has made. Therefore, many proposals for change and decisions about new ways to solve old problems are not put into practice.

In the intensive study over four years of three school management areas we draw conclusions on the causes of the strong stability in the schools also of other kinds. We find that several organizational arrangements support the stability, like i.e. the evident division of labour between different groups of teachers that blocks co-operation, the traditional division of the academic time in different subjects, that also is reflected in

the contracts of the teachers, that is a hindrance towards exploratory working methods for the students as it cuts the school day into too small pieces. Several other conclusions of the study is reported by Sandström (1986).

Five years of improvement efforts in Swedish schools

If you concentrate your research work only to three school organizations, as we did in the four year study, you will have an opportunity as a researcher to present observations and conclusions that may be general for other schools, if the school system is uniform enough. The Swedish school system is a highly centralized system that have resulted in local school management area that are rather similar. But as was shown in the results from the ten year study of twelve school management area there are evident variations between different local organizations also in Sweden. It has therefore been important to make studies of the improvement process in larger samples of schools than I earlier have reported on. One such longitudinal study has been made during the first years of the eighties in Sweden. In this study we have followed thirtyfive school management area of the grund school from 1980 until 1985.

The purpose of this study originally was to explore what improvement effects that came out of the Team Training programme and the School Leader Education programme mentioned above. As the study was made during the years from 1980 to 1985 the study to a great deal was focused also on the effects of the changes of the "läroplan" that was implemented during this period of time. The design of this study is not at all as intensive as the four year study. As we have tried to cover the history

of several local organizations, it became impossible to stay there all the time during the five years. We have used qualified evaluators instead, who have visited the thirtyfive school management area at three occasions.

The evaluators have used interviews with several sub-groups among the school members to be able to make three judgements of the principal's area. The evaluators mostly have worked in pairs. Among the school management areas that started the Team Training programme or the School Leader Education in 1980 seventyfive were invited to participate in the five year study. More than fifty of them were interested to participate, but we were only able to make evaluations of 38 school management areas. In the end in 1985 we have made three evaluations only in thirtyfive school management areas. One of the areas have disappeared because of demographic changes within the kommun. In one of the cases we found that the school was in such a bad condition that the evaluators had to engage themselves in improvement work to such large degree that they became active change agents instead of evaluators. The third case that dropped out did so because of the evaluators. They were badly selected and did not fulfill there task as they got occupied in other positions in the school system and were unable to engage themselves in the evaluation work.

The pairs of evaluators visit their principal's area for three or four days. The first visit was made in 1980, the second one in 1982 and the final one in 1985. The evaluators are selected among the such staffs who are working with improvement programmes either within the school leader education or within the regional county board of education. They are quite used to evaluate schools. The task of the evaluators during these days

are to create such a sharp picture as possible of the actual status of the local school. The instruments used by the evaluators are mainly group interviews in combination with individual interviews and of course very simple occasional observations of the school.

Before the evaluators pay their visits to the school, the school leader has a questionnaire to fill in. The questionnaire is about basic facts of the school such as the age of school building, how many pupils and teachers there are, which content it has been during the study days, if there are any specific INSET activities going on in the school and so on. The answers to these questions are sent to the evaluators before they enter the school. At their visit and during their interviews with groups and individuals they try to cover the following variables:

1. The aims of of the schools

- What consciousness is there of the central aims of the schools? - Are there any "local working plan" for the school? Does it cover the whole working process of the school? In what way was the plan constructed? If there is no "local working plan", in what way do people at the school try to reach the aims?

2. In what way is the work organized?

- In what way have working units and teams been constructed? In what way do they function?
- Are there any groupings? Of what kind? What reasons are there for the grouping? - Are there co-operation between subjects? In what ways is this co-operation organized?

- Views on the pastoral care responsibility of the school.
- Other views on how the school work is or ought to be organized.

3. Patterns of work

- How is the education planned, who participates in the planning process? - Are "exploring" working methods, project studies, problem oriented education in use? In what grade and in what subjects? In what proportion of the total education time? - For how long periods are plans made up? Do the students participate in the planning of the work (i.e. with views on time tabling)?
- Routines for passing through various stages of education, co-operation between the stages.

4. The decision making process

- The relation between formal and informal decision makers. The reaction between formal and informal decision making processes.
- To what extent do the people at the school feel themselves committed to the local decisions?
- Pupil involvement in different decisions (i.e. questions of learning aids). In what way do pupils use the existing possibilities of involvement in the decision making process?
- Who or what groups are perceived to have the greatest influence on what is done and on how one does it? (At both the formal and the informal level)
- To what extent do the group perceive it's own influence over the decisions? - What changes are wished for in the case of influence over the decisions?

5. The use of resources

- What resources are perceived as "free"?
- The distribution of "free" resources between the school management areas in the kommun.
- Informations about the economy of the school and what people actually know about the economy.
- The distribution of resources within the school, who shares etc?

6. In what way are change/development taking place?

- Who usually initiates changes? The role of the students in the change process. - What are the most usual pattern of reactions when change propositions are presented?
- Are there any patterns or models to use with the purpose of inventing propositions of changes (i.e. invention-groups, studycircles, invention-boxes, a living debate of ideas).
- Which are the most important changes one perceives at the school during the last three years?
- What kind of school problems are discussed at the moment at the school? - What problems at the school are judged to be the most important in the nearest future?
- What are the opinions about the possibilities and difficulties with solving these problems? Are there problems (which ones?) to which one expect or need help from outside to solve?

7. Evaluation

- What evaluation traditions exists? Are there i.e. annual reports from different sectors of the school? Are there anybody who works with overviews of what is going on in the whole school?

- Are there any special instrument used in the evaluative work?
- Are there any specific routines of evaluation?
- Who is usually evaluated - teachers? pupils? the school leaders? - Are there allocated specific time for evaluation?

After each visit to the school the evaluators have formulated a report on what they found and lock each of the reports away until the last one is made. The intention was that the two same evaluators should return to the same school management area both in 1982 and in 1985. At all school management areas one of the original evaluators have come back all three times. In almost half of the thirtyfive cases there have been changes of the second person who have worked as evaluator. At the two later occasions the evaluators have repeated the procedure from the first visit. They have also completed their inquiries with questions about reactions to the INSET programmes (put to such persons in the school who really took part in the programmes).

When the third evaluation was done of the school management area, the evaluators as before produce a report on the actual situation of the school, but now they also work out a judgement of what changes there have been throughout the whole period. This judgement have been presented to the members of the school and discussions will be held. The three quite frank evaluation reports from 1980, 1982 and 1985 together with the final edition that is presented to the school, from all the thirtyfive schools are now analysed.

Some preliminary results

Judging from the analysis work as far as it has advanced for the moment (April, 1986), there seem to have been some interesting changes occurring in many of the studied schools. In the thirty school management areas that we have analysed by now, we have noted some interesting patterns. In 1980 twenty of the thirty analysed schools had school leaders who worked in a more solitary way. By solitary we mean that the school leaders dominantly decide and act without regular meetings with steering committees, councils etc, to check with these about opinions and decisions. Ten of the schools had school leaders who worked in a more collective way, were they met different subgroups in regular ways, listened to them and took their meaning into consideration when they took decisions or acted.

One of the school management area, where the school leaders had acted in a more collective way in 1980, was changed in 1985. In this school, the school leaders had became more solitary over the years, which might have been caused by a series of non-succesful initiatives of the school leaders followed by reactions from the staff. Of the twenty school management areas which contained school leaders who acted in a more solitary way in 1980, thirteen was changed over the years to become more collective in their leadership.

Using the same simple categories - more solitary and more collective - when analysing the evaluation reports from the schools, we have also categorized in what way the work of the teaching staff appeared to the evaluators. In 1980 we found that twentyfour of the school managment areas contained teachers who worked in a more

solitary way, and that there was a more collective way to work among teachers in six of the thirty analysed areas. The solitary way to work among teachers is very much in line with old traditions for teacher-work in Swedish schools. When schools started to become a common phenomena in Sweden, in the late 19th century, single teachers worked on their own, far away from each others, in the countryside. The working pattern that was developed at that time, as well as the working pattern of the teachers who worked in the old secondary schools, where many teachers protected their position in the school and their degree of professionalism by working in an isolated way, have succeeded to survive, even when co-operation has become a popular working strategy in many other branches in the society. During the last decades there have been many voices raised to get teachers to work more together. Our five year study have helped us to see what happened during the beginning of the eighties.

In ten of the twentyfour school management areas, where teachers worked in a more solitary way in 1980, they still keep their working pattern alive in 1985. In fourteen of the school management areas where the solitary pattern was dominating in 1980, the teachers in 1985 have made a shift of their working pattern so there is more of a collective way to work. In Table 4 the results mentioned above is condensed in one table.

The pattern of work, among the adults of the thirty analysed management areas, has changed in such a way that your mind starts to seek for co-variations between what has happened with the school leaders' working pattern and the pattern of work among the teachers. To give a good understanding of these kind of co-variations our analysis have to be finished. We have to look deeper

into the five year history of the thirtyfive management areas that the evaluators have reported on. And we also have to relate the findings of changes in the working pattern among the students. As far as we have made our analysis by now we cannot report on any similar changes in the working pattern among the students. Among them we have not seen very much of improvements happen during the five year period.

Table 4. Changes of the school leaders way to work and the way in which the teachers work in thirty school management areas in Sweden between 1980 and 1985.

<u>The way in which the school leaders worked in</u>			<u>The way in which the teachers worked in</u>					
			1980					
			Solitary		Collective			
			and in 1985					
1 9 8 0	Solitary	1985	Sol	Col	Sol	Col		
			Sol	4	2	-	1	7
	Collective	1985	Col	5	7	-	1	13
			Sol	-	-	-	1	1
			Col	1	5	-	3	9
				10	14	0	6	30

The model of evaluation that the evaluators have used, is in many ways similar to what Walker (1974) calls "condensed fieldwork". The short time for the visit to the school, the ambition to cover the whole school and its atmosphere by the investigations are some examples. But there are some very evident differences. In the case of Walker's condensed fieldwork there is a heavy pressure to give a quick feedback to the school which has been investigated. Thereby the researcher could work in a more democratic mode. We have forced ourselves to delay the possibilities of the involved people of the school to influence the reports until several years have passed. There are two strong reasons why we thought it was necessary to wait for such a long period.

Firstly, we know that a rather long period has to pass before you can see if there are any effects of an improvement effort. The effects must have time to grow. Secondly, if we gave the schools an immediate feed back of what the evaluators have seen at the school, we think that we would change the situation in a way that means that we in fact only would evaluate the effects of giving feedback to schools instead of studying five years of their improvement history.

Some final remarks

The strong need for more and better research of longitudinal effects of school improvement efforts is evident. Practitioners who are engaged in making the quality of their schools better today have many nice advices from researchers about what to do. Too many of these advices have been based on too brief experiences with schools interested of changes. We need much more know-

318AJIAYA YPOC T23L

ledge about what happens in "normal" schools as well as we once have understood that we needed more knowledge about the development of the normal child. A development psychology that is only based on extreme children, like the very gifted and the very disturbed, is not very useful when you deal with non-extreme children. The same seems to be true to schools.

When you try to improve the large amount of "normal" schools, which do not contain either a very effective school leader or a well trained consultant, you need to have knowledge about the normal development of the school as a local organization. There have been many studies made of schools all over the world during the last decades. Some of them have been focused on the climate of the school, like i.e. the Coleman study in the end of the fifties (Coleman, 1961). Or studies of changes in local schools like those made by Gross et al (1971) or Keith and Smith (1971).

All these old studies are useful if we want to build up a better understanding of normal development of schools. It is possible to revisit the schools, reproduce the studies and complete them with historical analysis. We are working on this issue in Sweden and have created such studies that have been made by i.e. Runckel et al (1976) and Huberman and Miles (1985) with joy. The knowledge that is produced within such studies seem to be useful in the long run for schools which want to improve their quality. And there seem to be many of them around the world.

REFERENCES

Coleman, J.S. (1961)

The adolescent society. New York: The Free Press

Ekholm, M. (1976)

Social Development in Schools. Summary and Excerpts No. 48, Report from the Institute of Education, University of Göteborg, Göteborg

Ekholm, M., Wernersson, I. (1976)

Arbetsmönster och lärar-elev interaktion i grundskolan. Några empiriska resultat. Report No 138, Institute of Education, University of Göteborg, Göteborg

Ekholm, M. (1984)

Readiness to Help Others and Tolerance: Attitude Development During the School Years and a Ten-Year Comparison. Scandinavian Journal of Educational Research 28, 71-86

Eklund, H. (1974)

Frågor kring studiedagar - en enkätundersökning. (Questions about study days - a survey) Report 5 from Studiedagsprojektet, Dep of Education, University of Linköping.

Gross, N., Giacquinta, J.B., and Bernstein, M. (1971)

Implementing organizational innovations. A sociological analysis of planned educational change. Harper and Row, New York

Henricsson, S-E. (1984)

Kommunenkät angående det nya fortbildningssystemet.
(Survey to kommuns about the use of the new system of
inservice training of teachers) Report of evaluation
from the National Board of Education, Stockholm

Huberman, M. and Miles, M.B. (1984)

Innovation up close: how school improvement works.
Plenum, New York

Keith, P.M. and Smith, L.M. (1971)

Anatomy of Educational Innovation. Wiley and Sons,
New York

Murray, A.A. (1978)

Standard Proven Som Instrument Foer Jaemfoerelse av
Skolprestationer, Pedagogiska Naenden Redogorelse
Foer Verksamheten, Stockholm, National Board of Edu-
cation, p. 49-56

Runkel, P.J., Wyant, S.H., Bell, W.E. & Runkel, M (1980)

Organizational renewal in a school district: self-
help through a cadre of organizational specialists.
Eugene, Oregon: Center for Educational Policy and
Management, University of Oregon

Sandström, B. (1983)

Lärarnas syn på skolan. Resultat av en intervjustu-
die. Internal report of the INOVA-project, Institute
of Education, University of Linköping, Linköping

Sandström, B. and Ekholm, M. (1984)

Stabilitet och förändring i skolan. Liber, Stockholm

Sandström, B. and Ekholm, M. (1986)

Innovationer i grundskolan - metoder och resultatbil-
der. (Innovations in the grund school - methods and
outcomes.) Report no 98. Dep of Education, University
of Linköping.

Sandström, B. (1986)

Studies of the Process of Innovation in the Comprehensive School. Report no. 1986:01, Department of Education and Educational Research, Gothenburg University, Gothenburg

Walker, R. (1974)

The conduct of educational case study: ethics, theory and procedures in Innovation Evaluation Research and the Problem of Control. Some Interim Papers. (Edited by Macdonald, B. and Walker, R.) SAFARI-PROJECT, Centre for Applied Research in Education, University of East Anglia, Norwich